OKLAHOMA
MONTHLY SUMMARY
MAY 1990

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MAY 1990 OKLAHOMA SUMMARY

Violent May weather produced abundant rains leading to destructive flooding, and several severe weather outbreaks with an estimated 12 tornadoes and widespread damaging hail. The Statewide-averaged May precipitation total of 6.66", which ranks as 23rd wettest of the last 99 years, boosted the year-to-date total to 25.75". This accumulation ranks behind only the 25.94" of 1957 as the wettest beginning of an Oklahoma year. Northwestern and southwestern Oklahoma recorded below normal rainfall (see Fig. 1) which precluded the record but did aid the drying of area wheat fields prior to harvest. Many stations elsewhere reported rain on at least 10 days in the month. These rainy and cloudy conditions contributed to temperatures of 1 to 2.3 degrees below normal Statewide.

As the month began, a powerful upper-level storm system brought excessive rain to the State. Almost all stations recorded over an inch of rain on May 2 and 3. Two-day accumulations reached 6 to 10 inches over most of the southeastern one-fourth of the State where several stations proceeded on a record-breaking rainfall pace (see Fig. 2). Sallisaw's 6.35" boosted its year-to-date total precipitation above its long-term average for an entire year. These rains followed much above normal April rains that had already filled State reservoirs to near-capacity, contributing to record levels at Lakes Eufaula, Texoma, Sardis, Wister, McGee, Hugo and Arbuckle, according to the United States Geological Survey (USGS). The USGS also reported record peak discharges within Oklahoma along the Canadian, Washita and Kiamichi Rivers. Water topped the Lake Texoma spillway for the first time since 1957 and flooded several businesses and over 80 homes causing an estimated $6 million damage. Seventeen Muskogee area homes flooded along Sam and Coody Creeks. Seminole County road and bridge damages in excess of $1.5 million prompted County Commissioners to declare the county a disaster area. One drowning occurred in Oklahoma City's rain-swollen Brock Creek.

The State Food and Agriculture Council reported agricultural-related flood losses in excess of $57 million. Livestock losses, including over 2000 cattle and sheep, were assessed at over $1 million. Erosion and field flooding damaged 700,000 agricultural acres, mostly in southern and eastern Oklahoma, which accounted for nearly $45 million in losses. Choctaw County lowered its wheat harvest estimate by 75% after the flooding. Floods, however, spared most of the State's wheat crop. Despite rust and mildew problems, the USDA estimated an Oklahoma winter wheat harvest on 6.2 million acres yielding an average of 33 bushels per acre. This production is 25% above the 5 year average.

High pressure which moved in behind a mostly dry cold front on May 9 brought the State its coolest air of the month. Temperatures dipped into the 30's in the northern one-third of the State and into the low 40's elsewhere on the morning of May 10. The low at Goodwell reached 31 degrees. Such a late spring freeze occurs in only about 10% of the years in the central Panhandle.

A classic Oklahoma severe weather scenario developed on May 14. A dry line boundary formed west of the State, strong southerly winds enhanced Gulf moisture supplies, and an upper level jet stream supported severe storm development. Straight line winds from severe storms downed trees in Washington County and ripped 3 roofs from Waynoka buildings on May 14. The frontal-like dry line triggered more violent storms as it moved through the State on May 15. A devastating tornado in Stillwater killed one person, injured 11 others, destroyed 27 homes and caused some $5 million damage. A tornado in Rogers County damaged 10 homes but caused only eight minor injuries. Tornadoes were also reported in Kingfisher, Creek, Mayes and Tulsa Counties on May 15. Widespread severe storms produced softball-sized hail near Canton Lake, tennis ball-sized hail in Hydro and smaller hail in the Muskogee, Eufaula and Wilburton areas.

By May 19, a deepening low pressure system to the west steered southerly winds and Gulf moisture toward the State. Several hail-producing severe thunderstorms struck northeastern and central Oklahoma. Three-inch hailstones pounded central Oklahoma causing an estimated $70 million of property damage. Tulsa County reported golfball-sized hail. Rainfall averaged near one inch in Oklahoma's northeastern one-half.

Oklahoma received a much-needed, 2-day rainfall reprieve at the month's end. Although the April moisture aided wheat crop development, row crop seedbed preparation lagged five-year averages by nearly 15% due to wet field conditions.

- R. J. Sladewski

Table 1.

The 5 Wettest Statewide-Averaged April Precipitation Amounts on Record (1892-1990)

Rank	Year	Amount
1	1942	8.50
2	1957	8.18
3	1947	6.53
4	1922	6.45
5	1990	6.26

Figure 1. April 1990 percent of normal precipitation.

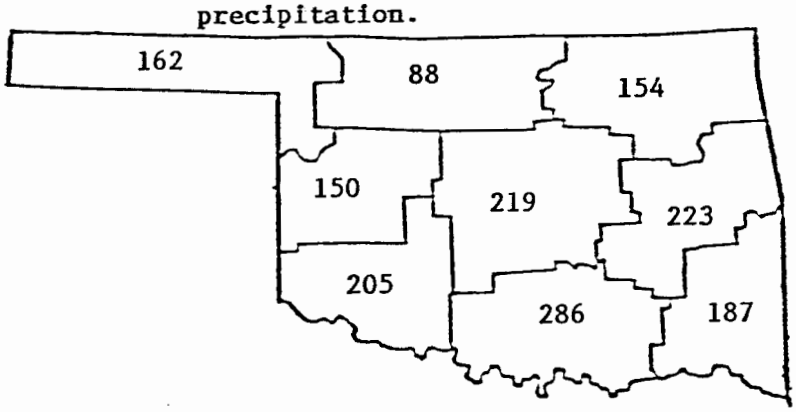


TABLE OF 1989/1990 COMPARISONS

Station	May Temperature (F) 1989	1990	May Precipitation (in.) 1989	1990
Arnett	66.0	64.2	4.38	2.59
Enid	69.1	67.2	4.80	3.60
Mutual	65.6	64.1	4.59	3.71
Tulsa	69.6	68.0	3.95	5.21
Elk City	68.4	68.0	6.26	5.30
Oklahoma City	70.1	69.5	3.79	5.79
McAlester	69.7	67.8	6.49	12.46
Altus Irr Sta	72.8	*	3.51	*
Durant	69.3	68.0	10.75	10.61
Ada	70.8	67.7	4.55	10.21
Antlers	70.8	68.8	8.28	11.07

* indicates missing data

EXTREMES

Variable	Station	Division	Observation	Date
Minimum temperature (F)	Goodwell	1	30	1
	Perry	2	30	4
Maximum temperature (F)	Walters	7	101	26
Maximum 24-hour precipitation	Hanna	6	8.04"	3

MAY 1990 SUMMARY FOR NORTHWEST DIVISION (CD1)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ARNETT	332	1	64.2	31	-2.1	98.	26	38.	1	141.5	54.5	115.5	-12.5	2.592	31	-1.55	1.53	30
BEAVER	593	1	62.3	31	-4.0	96.	25	33.	10	165.5	71.5	81.0	-53.0	1.950	31	-1.31	.99	3
BOISE CITY 2 E	908	1	61.1	31	-2.1	94.	23	32.	4	165.5	35.5	44.0	-30.0	2.650	31	.22	.88	3
BUFFALO	1243	1	66.9	31	-1.6	98.	24	36.	1	87.5	24.5	147.5	-23.5	1.490	31	-2.90	.42	29
FARGO	3070	1	*****	0	*****	****	0	****	0	******	******	******	******	2.290	31	-1.67	1.41	30
GAGE FAA APT	3407	1	65.7	31	-.8	98.	25	37.	10	108.0	21.0	131.0	-3.0	2.685	31	-.98	1.87	30
GATE	3489	1	64.0	31	*****	98.	25	38.	1	132.5	******	101.5	******	1.813	31	*****	1.13	3
GOODWELL RES ST	3628	1	61.7	31	-3.0	99.	24	30.	1	165.0	46.0	62.5	-46.5	2.606	31	-.26	1.22	30
GUYMON	3835	1	62.8	30	*****	98.	23	32.	10	150.0	******	82.5	******	4.132	30	*****	2.62	30
HOOKER	4298	1	61.6	31	-3.8	96.	24	31.	1	165.0	68.0	59.5	-49.5	2.831	31	-.60	1.52	3
KENTON	4766	1	59.1	31	-4.4	94.	24	32.	3	211.0	95.0	29.0	-40.0	2.921	31	.43	1.60	3
LAVERNE	5045	1	*****	0	*****	****	0	****	0	******	******	******	******	1.321	31	-2.07	.64	3
OPTIMA LAKE	6740	1	62.3	31	*****	98.	24	34.	10	163.0	******	79.0	******	2.911	31	*****	1.62	30
RANGE	7412	1	*****	0	*****	****	0	****	0	******	******	******	******	3.810	31	*****	2.51	29
REGNIER	7534	1	*****	0	*****	****	0	****	0	******	******	******	******	2.531	31	.61	1.19	3
TURPIN 4 SSE	9017	1	62.0	31	*****	96.	25	36.	10	162.5	******	69.0	******	2.690	31	*****	1.45	30

MAY 1990 SUMMARY FOR NORTH CENTRAL DIVISION (CD2)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ALVA 1 ENE	194	2	67.1	31	-1.0	96.	25	41.	10	78.5	21.5	142.5	-10.5	3.041	31	-1.02	1.65	30
VANCE AFB	302	2	*****	0	*****	****	0	****	0	******	******	******	******	3.490	31	*****	.89	16
BILLINGS	755	2	65.0	31	*****	90.	26	42.	6	108.0	******	109.5	******	3.600	31	-1.00	.94	3
BLACKWELL 2E	818	2	65.1	31	*****	94.	25	40.	10	97.0	******	101.0	******	2.903	31	*****	.65	30
BRAMAN	1075	2	*****	0	*****	****	0	****	0	******	******	******	******	2.855	31	*****	.69	3
CHEROKEE	1724	2	67.4	31	-1.3	94.	25	40.	10	81.5	36.5	155.5	-4.5	5.800	31	1.95	3.90	12
ENID	2912	2	67.2	31	-1.8	93.	26	43.	10	80.5	40.5	148.5	-15.5	3.600	31	-1.41	.96	3
FT SUPPLY DAM	3304	2	63.4	31	-4.1	97.	26	38.	10	144.0	75.0	94.5	-52.5	1.822	31	-1.89	.94	30
FREEDOM	3358	2	66.8	31	*****	96.	15	38.	10	96.0	******	152.0	******	2.710	31	*****	2.12	30
GREAT SALT PLNS	3740	2	66.9	31	*****	97.	26	41.	1	83.0	******	142.0	******	2.263	31	-1.32	.72	30
HARDY	3909	2	*****	0	*****	****	0	****	0	******	******	******	******	2.322	31	*****	.55	2
JEFFERSON	4573	2	66.3	31	-2.4	96.	25	38.	10	85.0	38.0	124.5	-37.5	2.200	31	-1.72	.72	2
LAMONT	5013	2	*****	0	*****	****	0	****	0	******	******	******	******	2.861	31	*****	.71	3
MEDFORD	5768	2	*****	0	*****	****	0	****	0	******	******	******	******	2.142	31	*****	.90	2
MORRISON	6065	2	*****	0	*****	****	0	****	0	******	******	******	******	3.810	31	*****	1.53	3
MUTUAL	6139	2	63.9	31	-3.2	96.	26	37.	1	133.0	54.0	99.5	-45.5	3.710	31	-.61	2.57	30
NEWKIRK	6278	2	65.4	31	-2.8	92.	26	40.	10	89.0	38.0	100.0	-51.0	2.870	31	-1.85	.52	30
ORIENTA	6751	2	*****	0	*****	****	0	****	0	******	******	******	******	3.230	31	*****	1.57	30
PERRY	7012	2	67.9	31	-1.4	94.	25	30.	4	64.0	26.0	155.0	-17.0	3.120	31	-2.16	1.29	3
PONCA CITY FAA	7201	2	67.0	31	-.7	94.	25	41.	5	72.0	7.0	133.5	-14.5	2.023	31	-2.47	.54	3
RED ROCK 1 NNE	7505	2	*****	0	*****	****	0	****	0	******	******	******	******	3.601	31	-1.03	.95	3
WAYNOKA	9404	2	66.7	31	-2.4	95.	25	39.	10	94.0	46.0	148.0	-27.0	2.970	31	-1.47	1.51	30
WOODWARD	9760	2	*****	0	*****	****	0	****	0	******	******	******	******	2.145	31	*****	1.42	30

MAY 1990 SUMMARY FOR NORTHEAST DIVISION (CD3)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	MAX DAY	MIN TEMP	MIN DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	MAX 24-HR DAY
BARNSDALL	535	3	66.0	31	*****	90.	25	38.	5	65.0	******	94.5	******	5.784	31	.51	2.36	16
BARTLESVILLE 2W	548	3	67.0	31	-1.7	94.	25	39.	5	59.5	23.5	121.0	-29.0	7.114	31	2.44	1.55	12
BIXBY	782	3	64.5	31	-4.1	91.	26	41.	6	99.5	56.5	84.5	-70.5	5.621	31	.97	1.84	3
BURBANK	1256	3	*****	0	*****	****	0	****	0	******	******	******	******	3.481	31	*****	.89	18
CHELSEA 4 S	1717	3	*****	0	*****	****	0	****	0	******	******	******	******	5.250	31	*****	1.23	3
CLAREMORE	1828	3	64.9	31	-3.0	89.	26	41.	6	89.5	26.5	87.0	-65.0	4.524	31	-.15	1.32	3
CLEVELAND 5 WSW	1902	3	67.1	29	*****	91.	25	43.	10	57.5	******	119.5	******	4.031	31	*****	1.50	3
FORAKER	3250	3	*****	0	*****	****	0	****	0	******	******	******	******	2.720	31	-2.10	.57	27
HOLLOW	4258	3	*****	0	*****	****	0	****	0	******	******	******	******	9.581	31	4.72	1.58	27
HOMINY	4289	3	*****	0	*****	****	0	****	0	******	******	******	******	5.110	31	.47	1.38	3
HULAH DAM	4393	3	64.6	26	*****	88.	21	43.	1	73.0	******	62.5	******	6.624	30	*****	2.80	15
JAY TOWER	4567	3	65.3	31	*****	89.	27	42.	10	70.5	******	80.5	******	7.930	31	*****	2.10	26
KANSAS 1 ESE	4672	3	64.6	31	*****	85.	25	41.	10	84.0	******	71.5	******	8.744	31	*****	2.40	3
KEYSTONE DAM	4812	3	64.9	31	*****	90.	26	38.	5	91.0	******	89.0	******	8.514	31	*****	3.06	3
LENAPAH	5118	3	*****	0	*****	****	0	****	0	******	******	******	******	9.102	31	*****	2.00	15
MANNFORD 6 NW	5522	3	67.3	30	*****	92.	25	40.	5	52.5	******	121.0	******	5.330	30	*****	2.31	3
MARAMEC	5540	3	*****	0	*****	****	0	****	0	******	******	******	******	4.841	31	-.17	1.58	3
MIAMI	5855	3	64.0	31	-3.9	88.	20	42.	5	91.0	33.0	58.5	-89.5	9.772	31	4.74	1.48	15
NOWATA	6485	3	65.3	30	-2.9	91.	25	42.	4	81.0	35.0	89.0	-56.0	9.082	31	4.46	1.45	16
ONETA 1 WNW	6713	3	*****	0	*****	****	0	****	0	******	******	******	******	4.721	31	*****	1.75	3
PAWHUSKA	6935	3	65.9	31	-2.3	92.	25	38.	5	73.5	25.5	101.0	-46.0	6.102	31	1.34	1.67	16
PAWHUSKA	6937	3	*****	0	*****	****	0	****	0	******	******	******	******	5.480	31	*****	1.59	16
PAWNEE	6940	3	*****	0	*****	****	0	****	0	******	******	******	******	4.730	31	-.11	1.65	3
PRYOR 6 N	7309	3	64.0	31	-4.1	88.	26	41.	6	103.5	48.5	72.0	-79.0	5.999	31	1.12	1.27	19
RALSTON	7390	3	67.9	31	*****	95.	25	40.	5	53.0	******	141.5	******	7.660	31	2.94	1.85	27
RAMONA 4 N	7394	3	*****	0	*****	****	0	****	0	******	******	******	******	5.910	31	*****	1.93	16
SKIATOOK	8258	3	*****	0	*****	****	0	****	0	******	******	******	******	4.730	31	.06	1.41	3
SPAVINAW	8380	3	65.7	31	*****	85.	26	42.	10	73.5	******	96.5	******	8.793	31	3.73	1.95	20
TULSA WSO APT	8992	3	68.0	31	-1.1	91.	25	44.	5	53.5	13.5	147.0	-20.0	5.215	31	.07	2.78	3
UPPER SPAVINAW	9101	3	61.2	29	*****	86.	25	38.	10	161.0	******	49.5	******	7.614	31	*****	2.42	3
VINITA 2 N	9203	3	63.6	28	*****	84.	15	40.	5	86.0	******	46.5	******	5.390	31	.04	1.03	3
WAGONER	9247	3	67.1	31	-2.1	88.	26	44.	5	57.5	27.5	122.0	-39.0	4.941	31	.11	1.63	3
WANN	9298	3	*****	0	*****	****	0	****	0	******	******	******	******	8.580	31	*****	1.98	12
WYNONA	9792	3	70.4	31	*****	91.	26	43.	5	29.5	******	196.5	******	6.133	31	*****	2.08	16

MAY 1990 SUMMARY FOR WEST CENTRAL DIVISION (CD4)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	MAX DAY	MIN TEMP	MIN DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	MAX 24-HR DAY
CANTON DAM	1445	4	65.4	31	-3.1	93.	26	40.	10	105.0	55.0	116.5	-42.5	3.073	31	-1.88	1.97	30
CHEYENNE	1738	4	*****	0	*****	****	0	****	0	******	******	******	******	4.220	31	*****	3.30	30
CLINTON	1909	4	69.7	31	.7	95.	25	40.	5	54.5	13.5	199.0	34.0	6.770	31	1.77	4.21	30
COLONY	2039	4	*****	0	*****	****	0	****	0	******	******	******	******	6.410	31	*****	2.99	30
CORDELL	2125	4	*****	0	*****	****	0	****	0	******	******	******	******	5.342	31	.66	3.20	30
ELK CITY 1 E	2849	4	68.0	31	*****	96.	15	42.	10	77.5	******	170.5	******	5.301	31	.37	4.14	30
ERICK 4 E	2944	4	67.9	29	*****	96.	25	38.	10	78.5	******	163.0	******	7.150	31	2.74	4.85	31
GEARY	3497	4	66.6	27	*****	92.	26	42.	5	65.0	******	107.5	******	5.600	31	.80	2.20	3
HAMMON 1 NNE	3871	4	64.9	31	-3.4	97.	16	38.	11	118.5	55.5	114.5	-50.5	4.521	31	-.04	3.71	29
LEEDEY	5090	4	*****	0	*****	****	0	****	0	******	******	******	******	5.190	31	.41	4.27	30
MACKIE 4 NNW	5463	4	*****	0	*****	****	0	****	0	******	******	******	******	4.440	31	*****	3.36	30
MORAVIA 2 NNE	6035	4	*****	0	*****	****	0	****	0	******	******	******	******	5.520	31	.77	3.34	30
OKEENE	6629	4	66.9	31	-2.6	93.	25	41.	10	79.0	43.0	139.0	-37.0	3.430	31	-1.56	.97	30
RETROP	7565	4	*****	0	*****	****	0	****	0	******	******	******	******	5.970	31	*****	3.70	30
REYDON	7579	4	67.3	31	*****	100.	25	37.	10	90.0	******	162.5	******	4.351	31	.06	2.50	29
SAYRE	7952	4	*****	0	*****	****	0	****	0	******	******	******	******	6.480	31	2.07	4.73	30
SWEETWATER 2 E	8652	4	*****	0	*****	****	0	****	0	******	******	******	******	5.230	31	*****	3.54	29
TALOGA	8708	4	66.4	31	-1.5	95.	24	37.	10	98.0	42.0	140.5	-5.5	3.101	31	-2.03	1.87	30
THOMAS	8815	4	*****	0	*****	****	0	****	0	******	******	******	******	3.180	31	*****	1.65	30
VICI	9172	4	*****	0	*****	****	0	****	0	******	******	******	******	5.004	31	*****	2.70	30
WATONGA	9364	4	66.6	31	*****	92.	20	41.	10	88.0	******	137.5	******	1.453	31	-3.53	.82	30
WEATHERFORD	9422	4	67.4	31	-1.9	96.	21	41.	1	78.0	45.0	152.0	-15.0	4.244	31	-.48	2.14	3

MAY 1990 SUMMARY FOR CENTRAL DIVISION (CD5)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	MAX DAY	MIN TEMP	MIN DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	MAX 24-HR DAY
AMBER	200	5	*****	0	*****	****	0	****	0	******	******	******	******	4.590	31	*****	2.42	3
ARCADIA	288	5	*****	0	*****	****	0	****	0	******	******	******	******	5.900	31	*****	2.30	3
TINKER AFB	325	5	*****	0	*****	****	0	****	0	******	******	******	******	6.225	31	*****	2.95	3
BLANCHARD 2 SSW	830	5	69.5	27	*****	92.	20	44.	10	42.0	******	164.5	******	5.741	31	*****	3.29	3
BRISTOW	1144	5	67.6	30	-1.5	91.	25	39.	5	48.0	16.0	125.5	-33.5	4.693	31	-1.04	2.27	3
CHANDLER	1684	5	67.6	27	*****	90.	25	42.	5	53.0	******	123.0	******	4.190	31	-1.22	2.10	3
CHICKASHA EX ST	1750	5	70.2	31	-.0	95.	20	40.	5	54.5	30.5	214.5	28.5	5.590	31	.47	2.56	3
COX CITY 1 E	2196	5	*****	0	*****	****	0	****	0	******	******	******	******	8.200	31	*****	3.60	3
CRESCENT	2242	5	*****	0	*****	****	0	****	0	******	******	******	******	4.380	31	*****	1.61	3
CUSHING	2318	5	66.1	31	-2.4	91.	27	44.	1	79.5	30.5	114.0	-44.0	5.530	31	.18	2.08	3
EL RENO 1 N	2818	5	68.5	31	-.2	93.	26	43.	10	66.0	29.0	173.0	21.0	5.360	31	.19	2.53	3
GUTHRIE	3821	5	69.7	30	.4	94.	26	44.	1	45.5	11.5	187.0	20.0	3.470	30	*****	2.02	3
HENNESSEY 2 SE	4055	5	66.8	31	-2.4	93.	25	41.	10	81.0	40.0	137.5	-34.5	4.110	31	-1.21	1.63	3
INGALLS	4489	5	*****	0	*****	****	0	****	0	******	******	******	******	5.191	31	*****	2.20	3
KINGFISHER 2 SE	4861	5	67.5	31	-1.9	93.	25	42.	10	69.5	34.5	145.5	-25.5	5.660	31	.72	1.95	3
KONAWA	4915	5	*****	0	*****	****	0	****	0	******	******	******	******	8.582	31	2.48	3.80	3
MARSHALL	5589	5	*****	0	*****	****	0	****	0	******	******	******	******	5.390	31	.14	2.12	16
MEEKER 4 W	5779	5	67.1	31	-1.9	89.	20	42.	5	61.0	26.0	126.0	-33.0	5.691	31	.05	2.68	2
MULHALL	6110	5	*****	0	*****	****	0	****	0	******	******	******	******	2.520	31	*****	1.51	3
NORMAN 3 S	6386	5	69.6	31	*****	95.	20	42.	5	49.5	******	192.5	******	7.101	31	1.21	3.96	3
OILTON 2 SE	6616	5	*****	0	*****	****	0	****	0	******	******	******	******	4.250	31	*****	2.76	2
OKEMAH	6638	5	68.2	31	-.9	91.	25	43.	5	46.5	19.5	147.0	-7.0	9.322	31	4.30	2.50	3
OKLAHOMA CTY WS	6661	5	69.5	31	1.1	94.	20	47.	10	45.5	4.5	184.5	37.5	5.794	31	.29	3.09	3
PERKINS	7003	5	*****	0	*****	****	0	****	0	******	******	******	******	3.320	31	-1.88	2.00	3
PIEDMONT	7068	5	*****	0	*****	****	0	****	0	******	******	******	******	6.470	31	*****	2.74	3
PRAGUE	7264	5	*****	0	*****	****	0	****	0	******	******	******	******	8.171	31	2.91	3.10	20
PURCELL 5 SW	7327	5	68.8	31	-.7	92.	21	39.	5	53.0	18.0	171.5	-3.5	7.110	31	1.09	3.45	3
SEMINOLE	8042	5	69.1	31	-1.3	90.	25	41.	5	39.5	16.5	168.0	-23.0	8.841	31	3.49	2.76	3
SHAWNEE	8110	5	*****	0	*****	****	0	****	0	******	******	******	******	8.270	31	2.26	2.78	3
STELLA	8479	5	*****	0	*****	****	0	****	0	******	******	******	******	5.200	31	*****	2.81	3
STILLWATER 2 W	8501	5	66.1	31	-2.3	93.	20	42.	5	89.5	41.5	123.5	-30.5	4.802	31	-.28	1.82	3
STROUD 1 N	8563	5	*****	0	*****	****	0	****	0	******	******	******	******	4.241	31	*****	2.07	3
TECUMSEH	8751	5	*****	0	*****	****	0	****	0	******	******	******	******	1.710	17	*****	.87	27
TROUSDALE	8960	5	*****	0	*****	****	0	****	0	******	******	******	******	2.780	31	*****	2.18	2
UNION CITY 1 SE	9086	5	*****	0	*****	****	0	****	0	******	******	******	******	4.970	31	-.93	2.29	3
WELTY 1 SSE	9479	5	*****	0	*****	****	0	****	0	******	******	******	******	7.120	31	*****	2.50	3
WEWOKA	9575	5	*****	0	*****	****	0	****	0	******	******	******	******	12.080	31	6.75	3.50	2

MAY 1990 SUMMARY FOR EAST CENTRAL DIVISION (CD6)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	MAX DAY	MIN TEMP	MIN DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	MAX DAY
ASHLAND	364	6	*****	0	*****	****	0	****	0	******	******	******	******	14.351	31	*****	6.15	3
BEGGS	631	6	*****	0	*****	****	0	****	0	******	******	******	******	5.400	31	*****	2.24	3
BOYNTON	1027	6	*****	0	*****	****	0	****	0	******	******	******	******	8.870	31	*****	2.20	3
CALVIN	1391	6	*****	0	*****	****	0	****	0	******	******	******	******	13.781	31	7.96	5.30	2
CHECOTAH	1711	6	*****	0	*****	****	0	****	0	******	******	******	******	10.764	31	5.38	5.47	3
CLAYTON 11 WNW	1858	6	*****	0	*****	****	0	****	0	******	******	******	******	14.610	31	*****	5.07	3
DEWAR 2 NE	2485	6	*****	0	*****	****	0	****	0	******	******	******	******	10.370	31	5.26	2.77	3
DUSTIN	2690	6	*****	0	*****	****	0	****	0	******	******	******	******	13.720	31	*****	4.25	3
EUFAULA	2993	6	68.5	25	*****	87.	25	46.	7	38.5	******	126.5	******	11.131	29	*****	4.56	3
HANNA	3884	6	67.8	31	*****	89.	25	42.	5	56.5	******	143.0	******	16.166	31	10.73	8.04	3
HARTSHORNE	3946	6	*****	0	*****	****	0	****	0	******	******	******	******	14.700	31	*****	5.73	3
HASKELL	3956	6	*****	0	*****	****	0	****	0	******	******	******	******	7.220	31	2.25	1.68	20
HOLDENVILLE	4235	6	68.4	31	-1.3	90.	25	41.	5	49.5	26.5	153.5	-15.5	11.341	31	5.74	3.66	3
LAKE EUFAULA	4975	6	67.1	31	*****	89.	26	45.	5	59.5	******	124.0	******	11.940	31	*****	4.18	3
LYONS 2 N	5437	6	*****	0	*****	****	0	****	0	******	******	******	******	13.421	31	8.11	4.12	3
MARBLE CITY	5546	6	*****	0	*****	****	0	****	0	******	******	******	******	15.142	31	*****	5.25	3
MCALESTER FAA	5664	6	67.8	31	-1.7	89.	25	40.	5	61.0	27.0	147.0	-27.0	12.467	31	6.85	3.78	3
MCCURTAIN 1 SE	5693	6	67.7	31	*****	90.	25	43.	5	49.5	******	134.0	******	13.432	31	7.76	4.10	3
MUSKOGEE	6130	6	67.6	31	-1.9	89.	25	43.	5	51.5	19.5	133.0	-39.0	9.670	31	4.64	2.97	2
OKMULGEE W W	6670	6	66.5	31	-2.8	91.	26	44.	5	63.5	33.5	109.0	-54.0	8.150	31	3.07	2.50	2
OKTAHA 2 NE	6678	6	*****	0	*****	****	0	****	0	******	******	******	******	10.280	31	*****	4.10	3
QUINTON	7372	6	*****	0	*****	****	0	****	0	******	******	******	******	12.372	31	6.80	4.36	3
SALLISAW 2 NE	7862	6	67.6	31	-2.1	89.	26	43.	10	51.5	26.5	132.0	-38.0	14.431	31	8.96	3.85	3
SCIPIO	7979	6	*****	0	*****	****	0	****	0	******	******	******	******	13.470	31	*****	5.12	3
SCRAPER	7993	6	*****	0	*****	****	0	****	0	******	******	******	******	9.020	31	*****	3.25	3
SHORT	8170	6	*****	0	*****	****	0	****	0	******	******	******	******	12.460	31	*****	4.30	3
STILWELL 1 NE	8506	6	65.1	31	*****	86.	25	42.	10	75.5	******	78.5	******	13.775	31	8.15	4.67	3
TAHLEQUAH	8677	6	66.2	31	-2.0	89.	25	41.	10	62.5	6.5	101.0	-54.0	9.802	31	4.33	4.20	3
WEBBERS FALLS	9445	6	65.1	31	-3.9	88.	26	43.	5	81.0	45.0	83.5	-76.5	11.550	31	6.24	3.70	3
WESTVILLE	9523	6	*****	0	*****	****	0	****	0	******	******	******	******	12.310	31	*****	4.28	3
WETUMKA 3 NE	9571	6	*****	0	*****	****	0	****	0	******	******	******	******	8.546	31	3.13	2.94	3

MAY 1990 SUMMARY FOR SOUTHWEST DIVISION (CD7)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	MAX DAY	MIN TEMP	MIN DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	MAX DAY
ALTUS IRR STA	179	7	70.3	31	-1.3	100.	25	42.	10	56.0	38.0	219.5	-2.5	3.120	31	-1.53	1.57	3
ALTUS DAM	184	7	68.9	31	*****	98.	26	41.	11	82.0	******	203.5	******	3.510	31	-1.27	2.29	3
ANADARKO	224	7	67.5	25	*****	93.	26	39.	1	60.5	******	122.5	******	4.510	31	-.38	1.69	3
APACHE	260	7	*****	0	*****	****	0	****	0	******	******	******	******	4.980	31	*****	1.98	3
ALTUS AFB	447	7	*****	0	*****	****	0	****	0	******	******	******	******	3.494	30	*****	2.34	3
CARNEGIE 2 ENE	1504	7	69.0	31	-1.0	94.	26	40.	10	67.5	43.5	191.5	12.5	5.650	31	.53	1.83	30
CHATTANOOGA	1706	7	70.4	29	*****	100.	26	41.	10	63.5	******	221.0	******	3.181	29	*****	2.27	2
DUNCAN 12 W	2668	7	*****	0	*****	****	0	****	0	******	******	******	******	4.931	31	*****	1.90	2
FREDERICK	3353	7	68.9	26	*****	95.	21	46.	10	59.0	******	159.5	******	3.552	26	*****	1.55	3
GRANDFIELD 4 NW	3709	7	*****	0	*****	****	0	****	0	******	******	******	******	3.240	31	-1.70	1.30	2
HOBART FAA APT	4204	7	68.8	31	-.3	95.	25	40.	10	65.5	26.5	183.5	17.5	4.794	31	-.19	2.06	3
HOLLIS	4249	7	69.7	31	-2.1	100.	26	39.	10	70.5	51.5	217.5	-12.5	3.380	31	-.69	1.39	30
LAWTON	5063	7	69.8	31	-.8	100.	26	46.	4	52.0	30.0	201.0	6.0	3.410	31	-2.28	1.70	1
FORT SILL	5068	7	69.4	31	*****	98.	26	45.	10	54.5	******	190.5	******	3.206	31	-2.48	1.49	2
LOOKEBA 2 ENE	5329	7	*****	0	*****	****	0	****	0	******	******	******	******	5.820	31	*****	2.34	30
MANGUM RES STA	5509	7	70.2	31	-.8	100.	25	40.	10	56.0	32.0	217.0	7.0	3.080	31	-1.64	1.47	3
RANDLETT 9 E	7403	7	*****	0	*****	****	0	****	0	******	******	******	******	4.870	31	*****	2.80	3
ROOSEVELT	7727	7	*****	0	*****	****	0	****	0	******	******	******	******	4.330	31	-.92	2.78	3
SEDAN	8016	7	*****	0	*****	****	0	****	0	******	******	******	******	4.490	31	*****	1.98	3
VINSON 3 WNW	9212	7	*****	0	*****	****	0	****	0	******	******	******	******	4.740	31	.10	3.15	30
WALTERS	9278	7	70.3	31	-1.2	101.	26	44.	10	54.5	37.5	219.0	.0	6.250	31	.94	3.07	2
WICHITA MT WLR	9629	7	66.6	31	-2.6	96.	27	39.	10	84.0	54.0	134.5	-25.5	2.970	31	-2.27	1.20	3
WILLOW	9668	7	*****	0	*****	****	0	****	0	******	******	******	******	6.221	31	*****	4.05	30

MAY 1990 SUMMARY FOR SOUTH CENTRAL DIVISION (CD8)

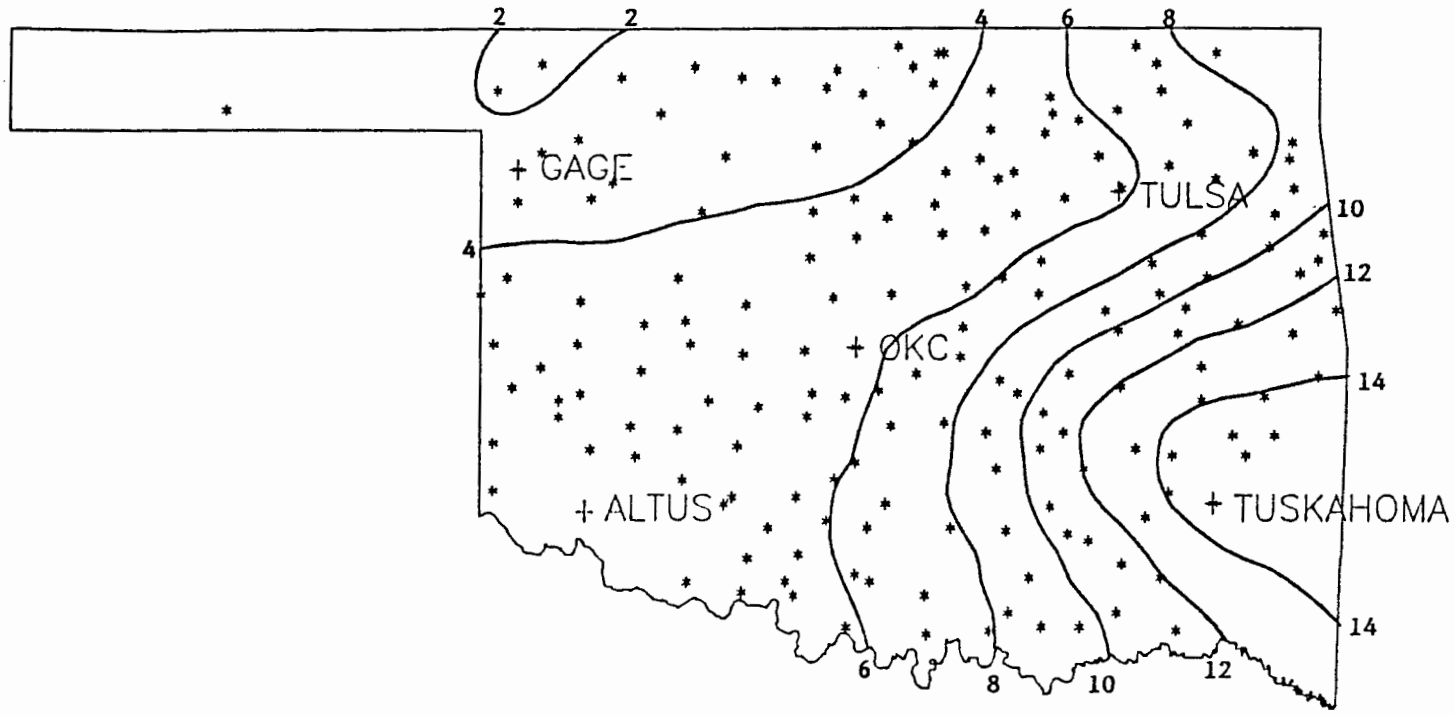
NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ADA	17	8	67.9	31	-1.8	90.	20	42.	5	63.5	40.5	153.0	-15.0	10.210	31	4.58	5.73	3
ALLEN	147	8	*****	0	*****	****	0	****	0	******	******	******	******	12.000	31	*****	7.30	3
ARDMORE	292	8	70.5	31	-1.9	92.	21	44.	5	41.5	34.5	211.0	-25.0	7.871	31	3.23	3.40	2
ATOKA DAM	394	8	68.0	31	*****	94.	20	45.	10	65.0	******	158.5	******	8.411	31	*****	2.70	2
BOKCHITO	917	8	*****	0	*****	****	0	****	0	******	******	******	******	10.530	31	*****	6.50	3
CANEY	1437	8	70.2	31	*****	91.	20	50.	10	41.0	******	202.5	******	10.480	31	*****	5.40	2
CENTRAHOMA	1648	8	*****	0	*****	****	0	****	0	******	******	******	******	4.001	31	*****	1.80	2
CHICKASAW NRA	1745	8	67.5	31	*****	91.	21	39.	5	77.0	******	155.5	******	7.590	31	*****	4.70	3
COLEMAN	2011	8	*****	0	*****	****	0	****	0	******	******	******	******	6.530	31	*****	2.60	2
COMANCHE	2054	8	*****	0	*****	****	0	****	0	******	******	******	******	6.671	31	*****	4.12	3
DAISY 4 ENE	2354	8	*****	0	*****	****	0	****	0	******	******	******	******	16.281	31	9.98	6.45	3
DUNCAN	2660	8	68.6	31	-2.3	94.	27	44.	5	68.5	51.5	181.5	-18.5	6.431	31	.81	2.90	2
DURANT USDA	2678	8	68.0	31	*****	92.	21	44.	6	58.0	******	150.0	******	10.610	31	5.61	6.95	3
ELMORE CITY	2872	8	*****	0	*****	****	0	****	0	******	******	******	******	7.031	31	*****	3.10	4
FARRIS 3 WNW	3083	8	*****	0	*****	****	0	****	0	******	******	******	******	12.400	31	*****	6.46	3
GRADY	3688	8	*****	0	*****	****	0	****	0	******	******	******	******	4.322	31	*****	2.43	3
HEALDTON	4001	8	70.3	31	*****	95.	20	43.	5	52.0	******	216.5	******	4.820	31	-.03	2.98	3
HENNEPIN	4052	8	*****	0	*****	****	0	****	0	******	******	******	******	8.530	31	*****	4.17	3
KETCHUM RANCH	4780	8	*****	0	*****	****	0	****	0	******	******	******	******	6.810	31	*****	3.10	2
KINGSTON	4865	8	*****	0	*****	****	0	****	0	******	******	******	******	8.012	31	2.97	5.27	3
LEHIGH	5108	8	*****	0	*****	****	0	****	0	******	******	******	******	11.756	31	*****	4.80	3
LINDSAY 2 W	5216	8	69.3	31	*****	92.	20	42.	10	53.0	******	187.0	******	6.030	31	-.25	3.21	3
LOCO 6 SE	5247	8	*****	0	*****	****	0	****	0	******	******	******	******	5.292	31	*****	2.89	3
MADILL	5468	8	70.7	31	-.2	96.	21	41.	10	42.5	29.5	220.5	24.5	5.160	31	.06	3.85	2
MARIETTA	5563	8	71.3	31	.5	95.	20	45.	10	41.5	26.5	238.0	43.0	5.872	31	1.32	4.03	3
MARLOW 1 WSW	5581	8	69.4	31	*****	94.	26	40.	10	61.0	******	197.0	******	4.961	31	-1.05	2.43	3
MCGEE CREEK DAM	5713	8	67.7	31	*****	91.	26	43.	5	61.5	******	146.0	******	11.982	31	*****	6.54	3
OSWALT	6787	8	*****	0	*****	****	0	****	0	******	******	******	******	9.810	31	*****	3.10	22
PAULS VALLEY	6926	8	69.9	30	-1.2	92.	20	42.	5	44.0	26.0	191.0	-16.0	7.092	30	*****	3.20	3
PONTOTOC	7214	8	*****	0	*****	****	0	****	0	******	******	******	******	13.150	31	7.42	3.25	4
TISHOMINGO NWLR	8884	8	70.6	28	*****	91.	26	48.	1	35.0	******	193.0	******	6.700	30	*****	3.83	3
TUSSY	9032	8	*****	0	*****	****	0	****	0	******	******	******	******	5.900	31	*****	2.36	3
WAURIKA	9395	8	72.1	31	.2	96.	26	43.	5	42.5	29.5	262.5	35.5	6.980	31	2.13	3.57	3
WAURIKA DAM	9399	8	69.6	31	*****	96.	27	41.	4	65.0	******	209.0	******	5.992	31	*****	3.63	3

MAY 1990 SUMMARY FOR SOUTHEAST DIVISION (CD9)

NAME	ID	CD	MEAN TEMP	NUM OBS	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEG DAY	DEV FROM NORM	COOL DEG DAY	DEV FROM NORM	TOT PPT	NUM OBS	DEV FROM NORM	MAX 24-HR	DAY
ANTLERS	256	9	69.0	31	-.8	90.	20	44.	5	43.5	17.5	167.5	-6.5	11.070	31	5.13	3.97	3
BATTIEST 1 SSW	567	9	67.3	31	*****	87.	25	43.	10	44.0	******	114.0	******	16.440	31	*****	6.55	3
BEAR MT TWR	584	9	67.0	18	*****	86.	15	45.	5	26.0	******	61.5	******	14.670	31	9.14	3.73	3
BENGAL	670	9	*****	0	*****	****	0	****	0	******	******	******	******	20.490	31	*****	7.38	3
BOSWELL 4 NNW	980	9	71.1	31	*****	91.	20	46.	5	28.5	******	219.0	******	11.944	31	6.99	5.26	3
BROKEN BOW 1 N	1162	9	*****	0	*****	****	0	****	0	******	******	******	******	12.731	31	7.04	3.16	3
BROKEN BOW DAM	1168	9	66.6	31	*****	90.	25	43.	9	46.0	******	96.5	******	12.810	31	*****	3.20	2
CARNASAW TWR	1499	9	*****	0	*****	****	0	****	0	******	******	******	******	13.100	31	6.76	3.28	3
CARTER TWR	1544	9	*****	0	*****	****	0	****	0	******	******	******	******	15.630	31	9.69	4.25	3
FANSHAWE	3065	9	*****	0	*****	****	0	****	0	******	******	******	******	16.610	31	10.70	4.57	3
FLAGPOLE TWR	3169	9	*****	0	*****	****	0	****	0	******	******	******	******	16.340	18	*****	6.95	29
HEAVENER 1 SE	4008	9	*****	0	*****	****	0	****	0	******	******	******	******	13.641	31	8.12	4.90	2
HEE MT TWR	4017	9	*****	0	*****	****	0	****	0	******	******	******	******	19.160	31	*****	3.96	21
HUGO	4384	9	69.4	31	-1.9	89.	20	46.	10	39.0	30.0	175.0	-30.0	9.462	31	3.80	3.82	3
IDABEL	4451	9	67.5	31	-3.0	88.	27	45.	10	40.5	25.5	117.0	-69.0	13.230	31	7.56	3.87	3
JADIE TOWER	4560	9	*****	0	*****	****	0	****	0	******	******	******	******	9.010	31	*****	2.00	20
POTEAU W W	7254	9	66.8	28	*****	89.	25	45.	9	46.0	******	96.5	******	15.680	29	*****	4.80	2
SMITHVILLE 1 W	8285	9	64.1	31	*****	86.	26	38.	10	86.5	******	58.5	******	22.002	31	*****	4.88	2
SOBAL TOWER	8305	9	67.2	29	*****	89.	29	46.	10	50.0	******	115.0	******	5.212	24	*****	2.30	27
SPIRO	8416	9	*****	0	*****	****	0	****	0	******	******	******	******	14.460	31	9.10	4.71	3
TUSKAHOMA	9023	9	68.9	31	*****	88.	25	41.	10	47.0	******	167.0	******	14.781	31	*****	5.15	3
VALLIANT 3 W	9118	9	*****	0	*****	****	0	****	0	******	******	******	******	12.827	31	7.33	4.47	3
WILBURTON 9 ENE	9634	9	67.5	31	-1.7	90.	25	40.	5	59.0	21.0	137.0	-31.0	16.451	31	10.83	5.50	2

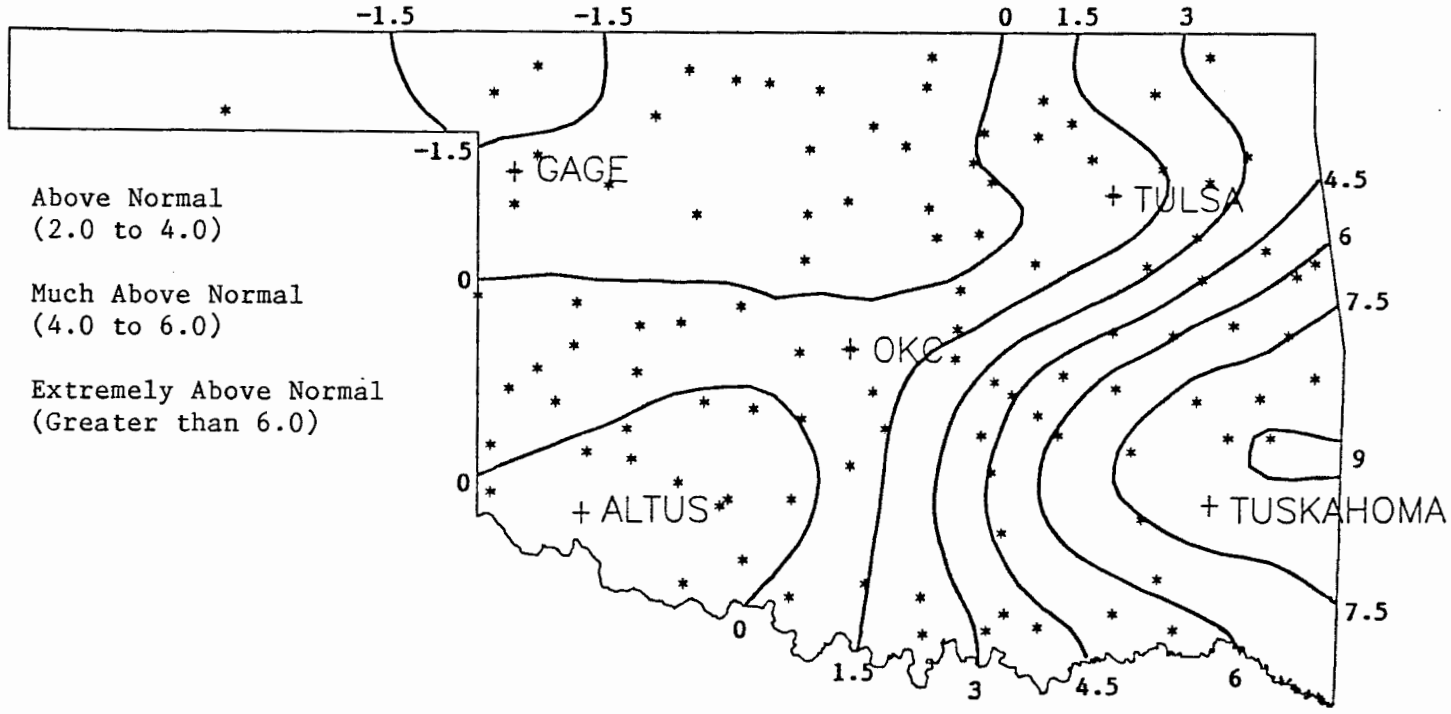
MAY 1990 CLIMATE DIVISION SUMMARY

CLIMATE DIV	MEAN TEMP	NUM STA	DEV FROM NORM	MAX TEMP	DAY	MIN TEMP	DAY	HEAT DEGREE DAYS	DEV FROM NORM	COOL DEGREE DAYS	DEV FROM NORM	TOT PPT	NUM STA	DEV FROM NORM	MAX 24-HR	DAY
1	62.8	12	-2.7	99.0	24	30.0	1	151.4	52.3	83.5	-32.5	2.47	15	-.79	2.62	30
2	66.2	14	-2.2	97.0	26	30.0	4	93.3	39.3	129.0	-28.7	3.00	23	-1.35	3.90	12
3	66.0	17	-2.2	95.0	25	38.0	10	72.2	22.6	104.3	-46.2	6.35	32	1.51	3.06	3
4	66.9	9	-1.8	100.0	25	37.0	10	87.6	42.0	148.0	-13.5	4.82	22	.06	4.85	31
5	68.2	14	-1.0	95.0	20	39.0	5	59.2	24.0	157.9	-7.0	5.93	35	.47	3.96	3
6	67.0	11	-2.3	91.0	26	40.0	5	60.1	26.4	121.7	-44.5	11.78	30	6.37	8.04	3
7	69.3	10	-1.4	101.0	26	39.0	10	64.3	41.3	197.8	-2.3	4.38	20	-.59	4.05	30
8	69.4	16	-1.7	96.0	27	39.0	5	54.8	39.7	192.5	-11.7	8.20	32	2.87	7.30	3
9	67.9	9	-2.3	91.0	20	38.0	10	48.2	26.2	139.1	-44.2	14.53	20	8.85	7.38	3



MAY 1990 TOTAL PRECIPITATION

(Inches)



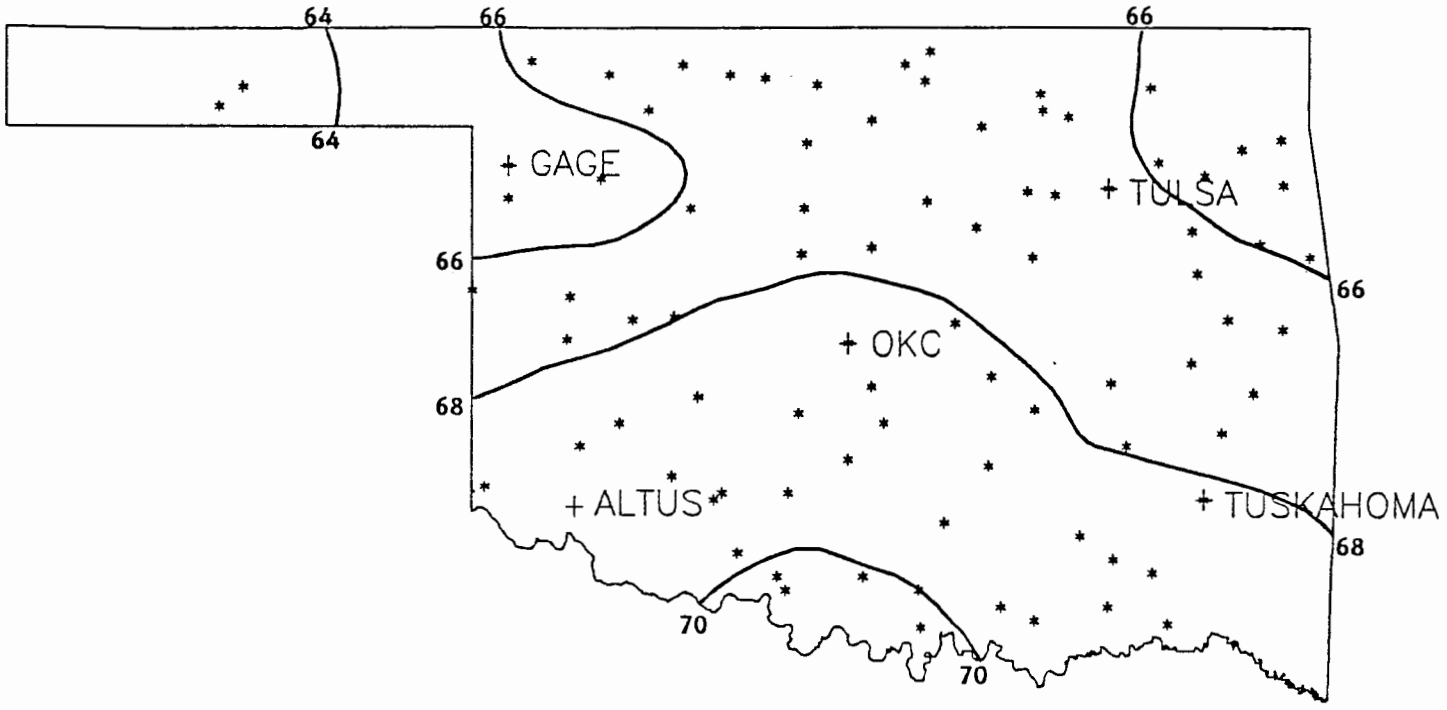
Above Normal
(2.0 to 4.0)

Much Above Normal
(4.0 to 6.0)

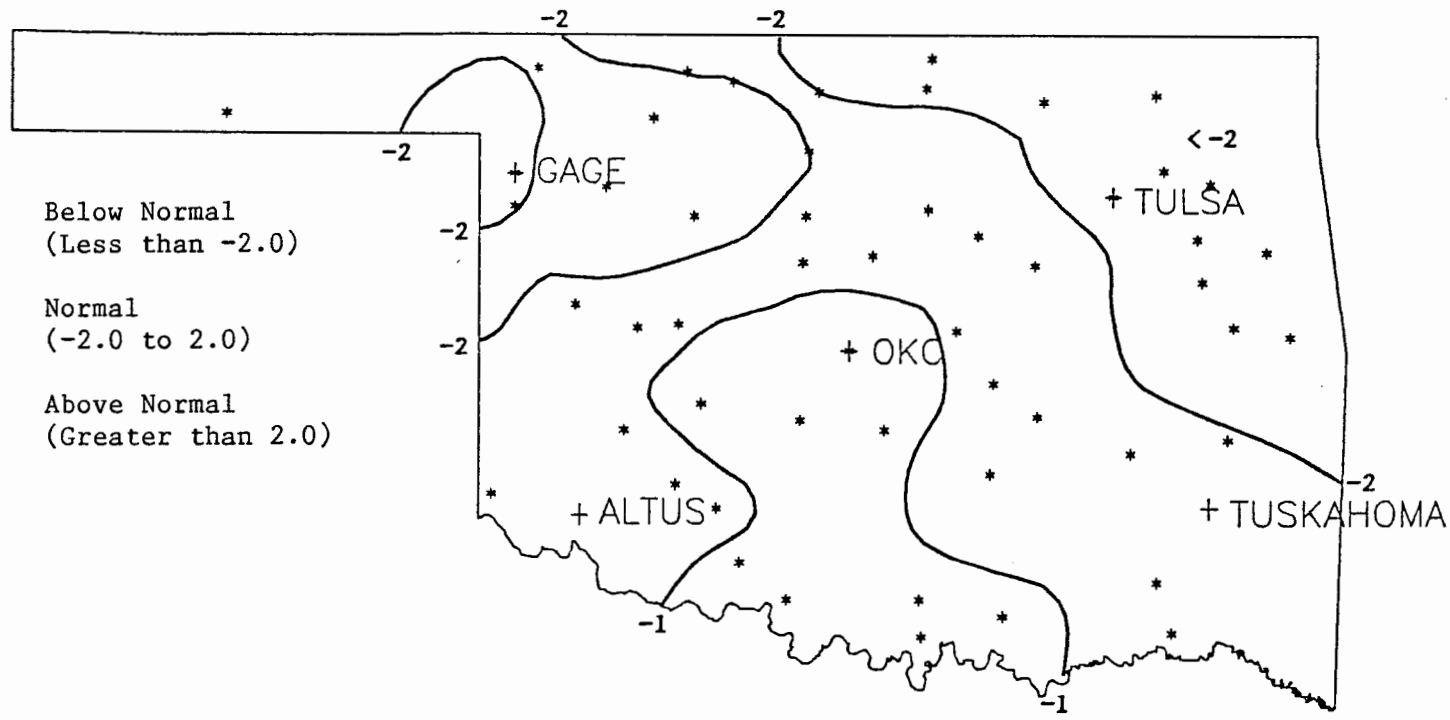
Extremely Above Normal
(Greater than 6.0)

MAY 1990 DEVIATION FROM NORMAL PRECIPITATION

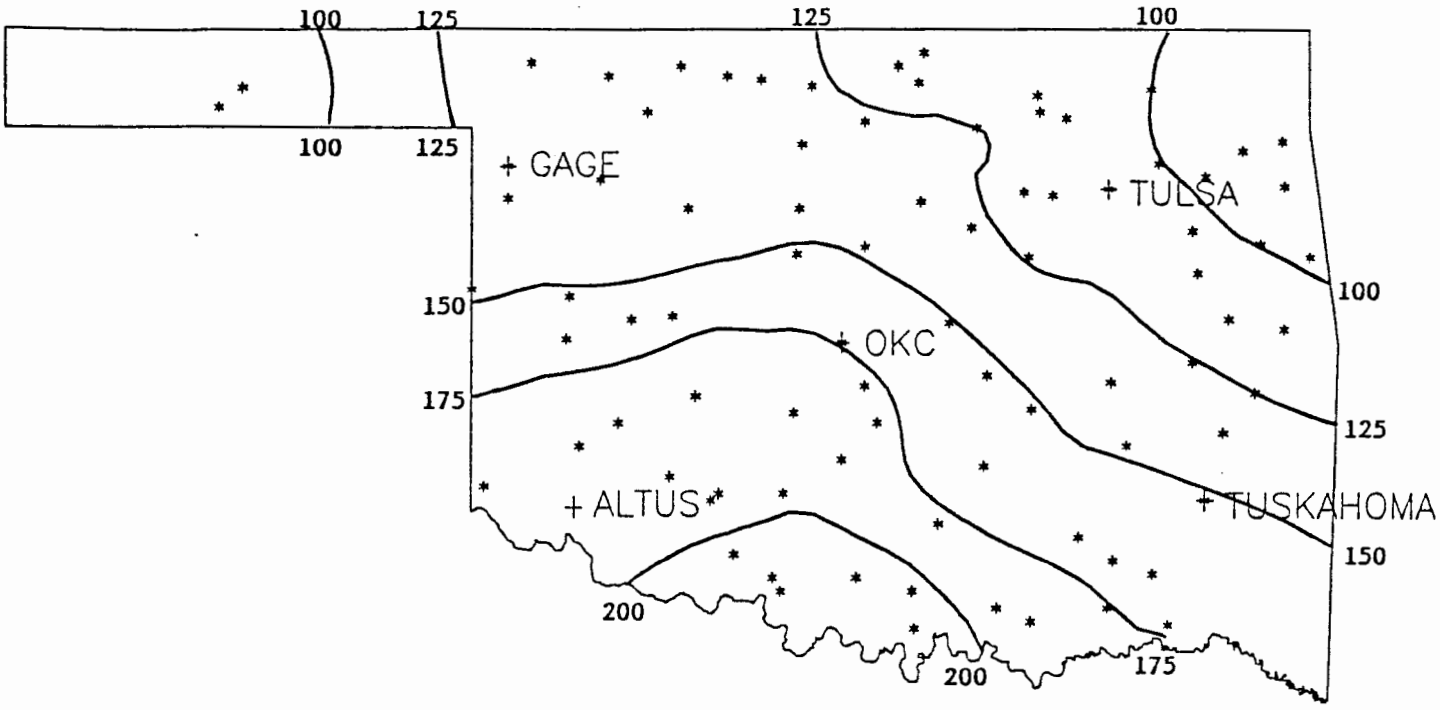
(Inches)



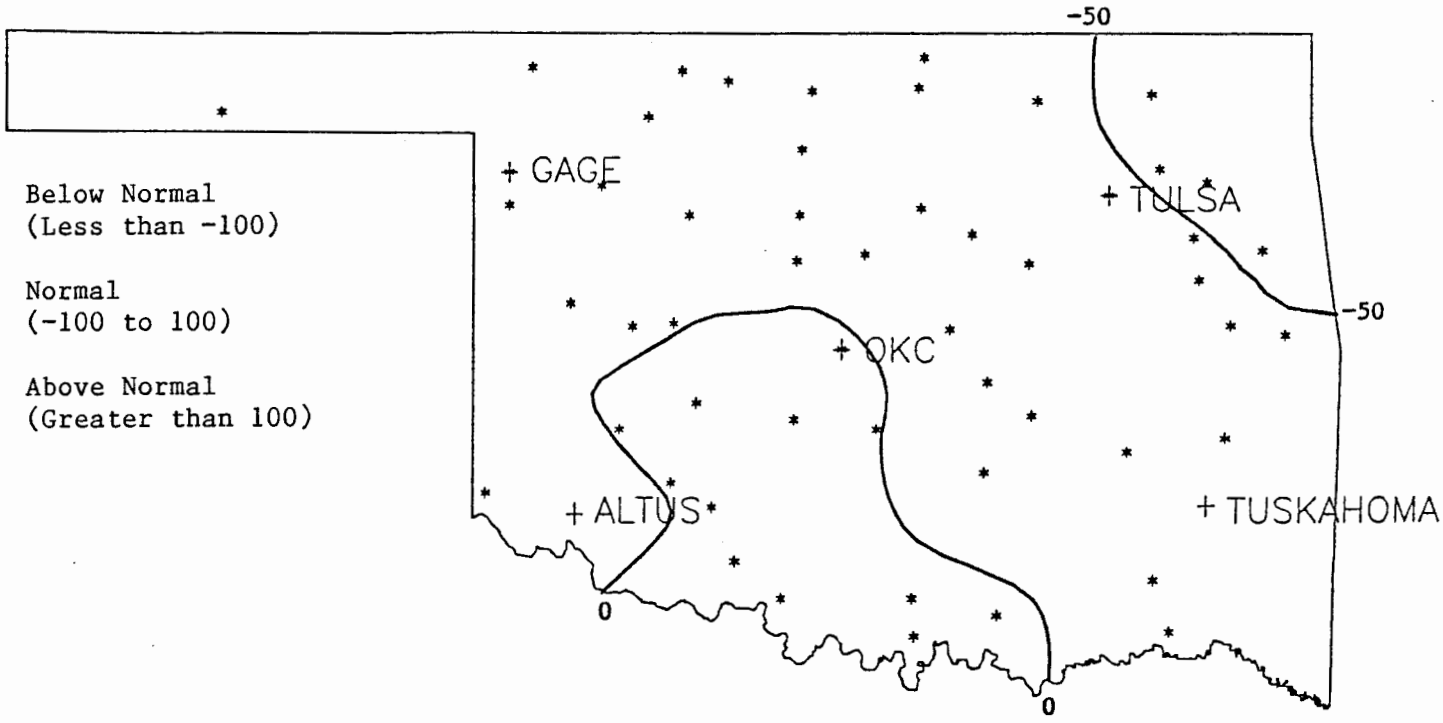
MAY 1990 AVERAGE MONTHLY TEMPERATURES
(Degrees F)



MAY 1990 DEVIATION FROM NORMAL TEMPERATURES
(Degrees F)

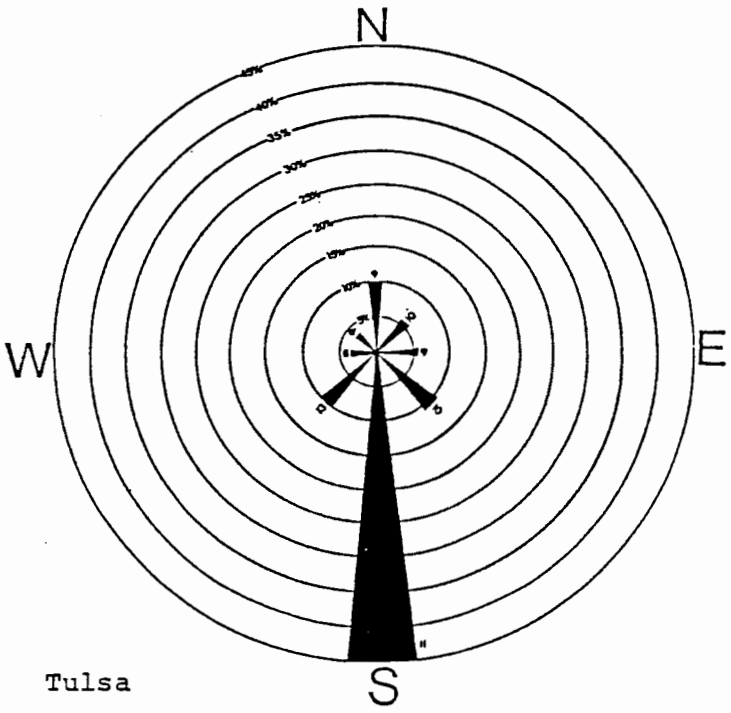


MAY 1990 COOLING DEGREE DAYS

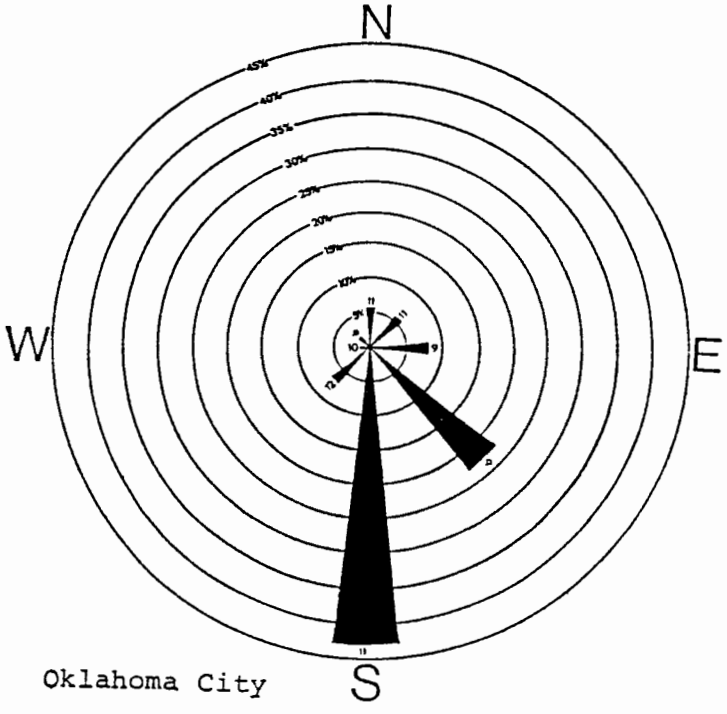


MAY 1990 DEVIATION FROM NORMAL COOLING DEGREE DAYS

July wind roses for Oklahoma City and Tulsa for 10-year (1965-1974) mean winds (data adapted from NOAA Airport Climatology Series). Percents represent the percentages for winds coming from a direction. The numbers at the end of the bars indicate the average speed (miles per hour) of winds from that direction.



Tulsa



Oklahoma City

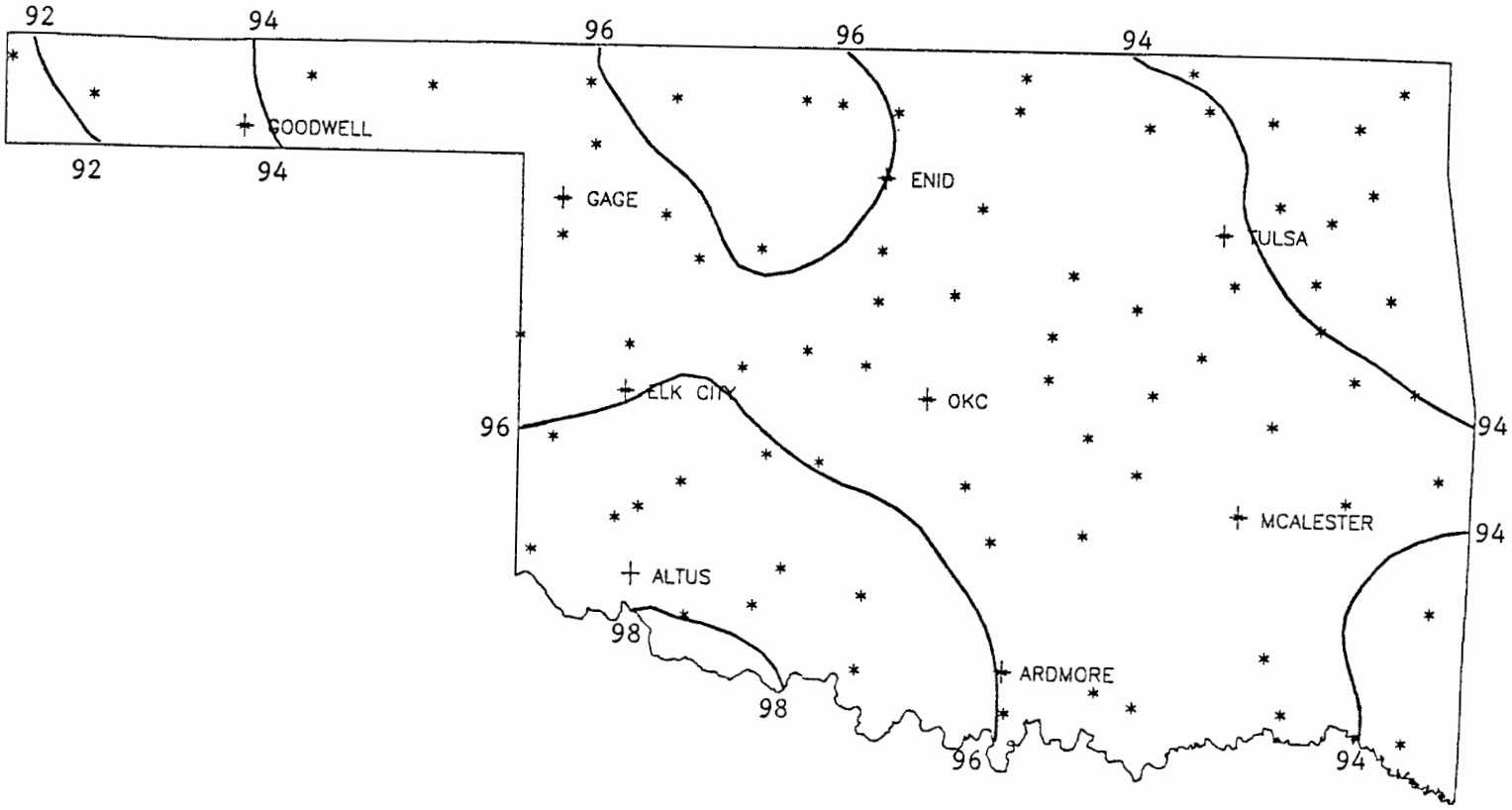
JULY 1990 SUNRISE AND SUNSET

Oklahoma City

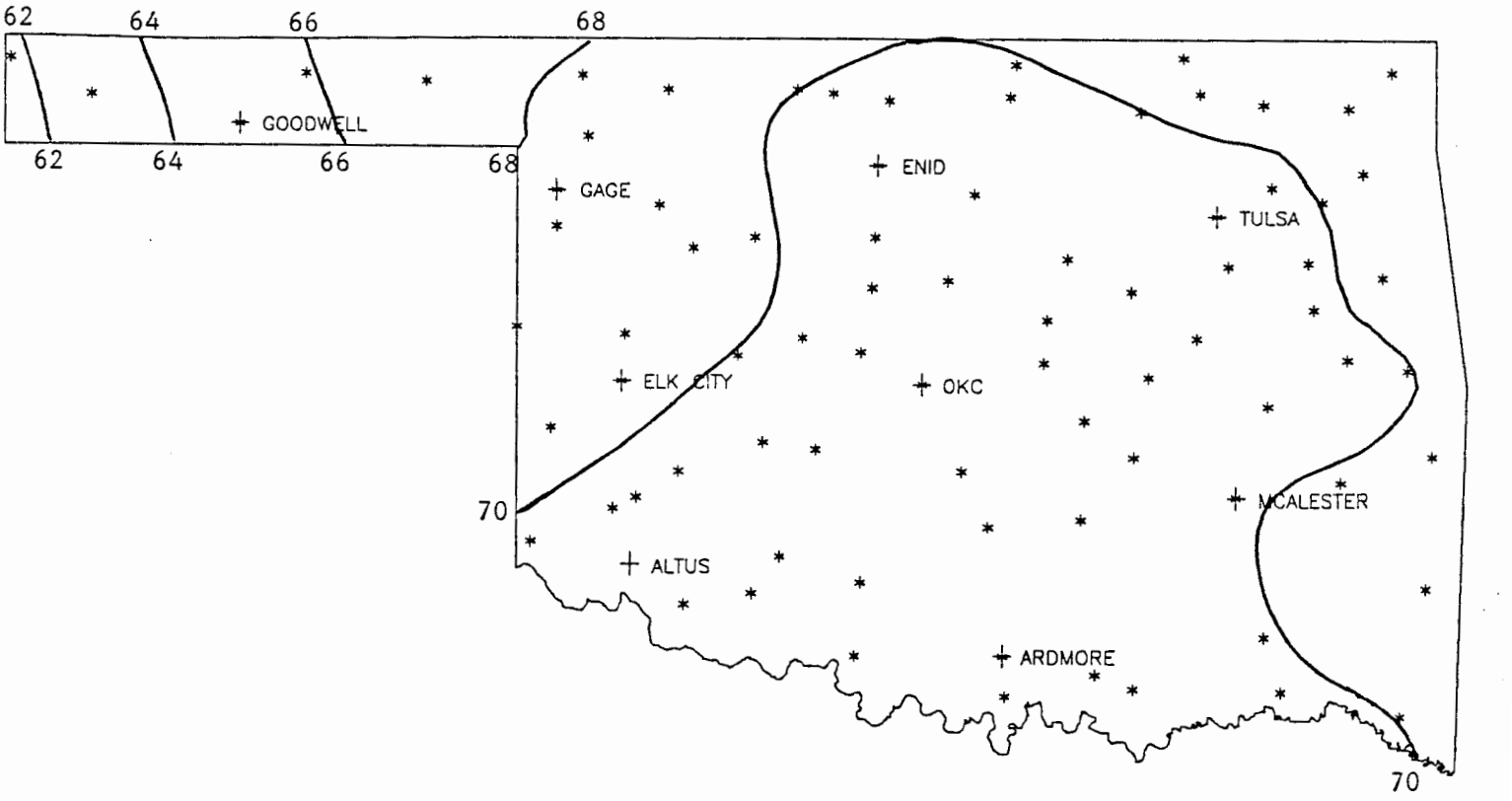
DATE	SUNRISE	SUNSET	DAYLIGHT
900701	6:21AM	8:47PM LT	14:27
900702	6:21AM	8:47PM LT	14:26
900703	6:22AM	8:47PM LT	14:26
900704	6:22AM	8:47PM LT	14:25
900705	6:22AM	8:47PM LT	14:25
900706	6:23AM	8:47PM LT	14:24
900707	6:23AM	8:47PM LT	14:23
900708	6:24AM	8:47PM LT	14:23
900709	6:24AM	8:46PM LT	14:22
900710	6:25AM	8:46PM LT	14:21
900711	6:25AM	8:46PM LT	14:20
900712	6:26AM	8:46PM LT	14:20
900713	6:27AM	8:45PM LT	14:19
900714	6:27AM	8:45PM LT	14:18
900715	6:28AM	8:45PM LT	14:17
900716	6:28AM	8:44PM LT	14:16
900717	6:29AM	8:44PM LT	14:15
900718	6:30AM	8:43PM LT	14:14
900719	6:30AM	8:43PM LT	14:13
900720	6:31AM	8:42PM LT	14:12
900721	6:32AM	8:42PM LT	14:10
900722	6:32AM	8:41PM LT	14: 9
900723	6:33AM	8:41PM LT	14: 8
900724	6:34AM	8:40PM LT	14: 7
900725	6:34AM	8:40PM LT	14: 5
900726	6:35AM	8:39PM LT	14: 4
900727	6:36AM	8:38PM LT	14: 3
900728	6:36AM	8:38PM LT	14: 1
900729	6:37AM	8:37PM LT	13:60
900730	6:38AM	8:36PM LT	13:58
900731	6:38AM	8:35PM LT	13:57

Tulsa

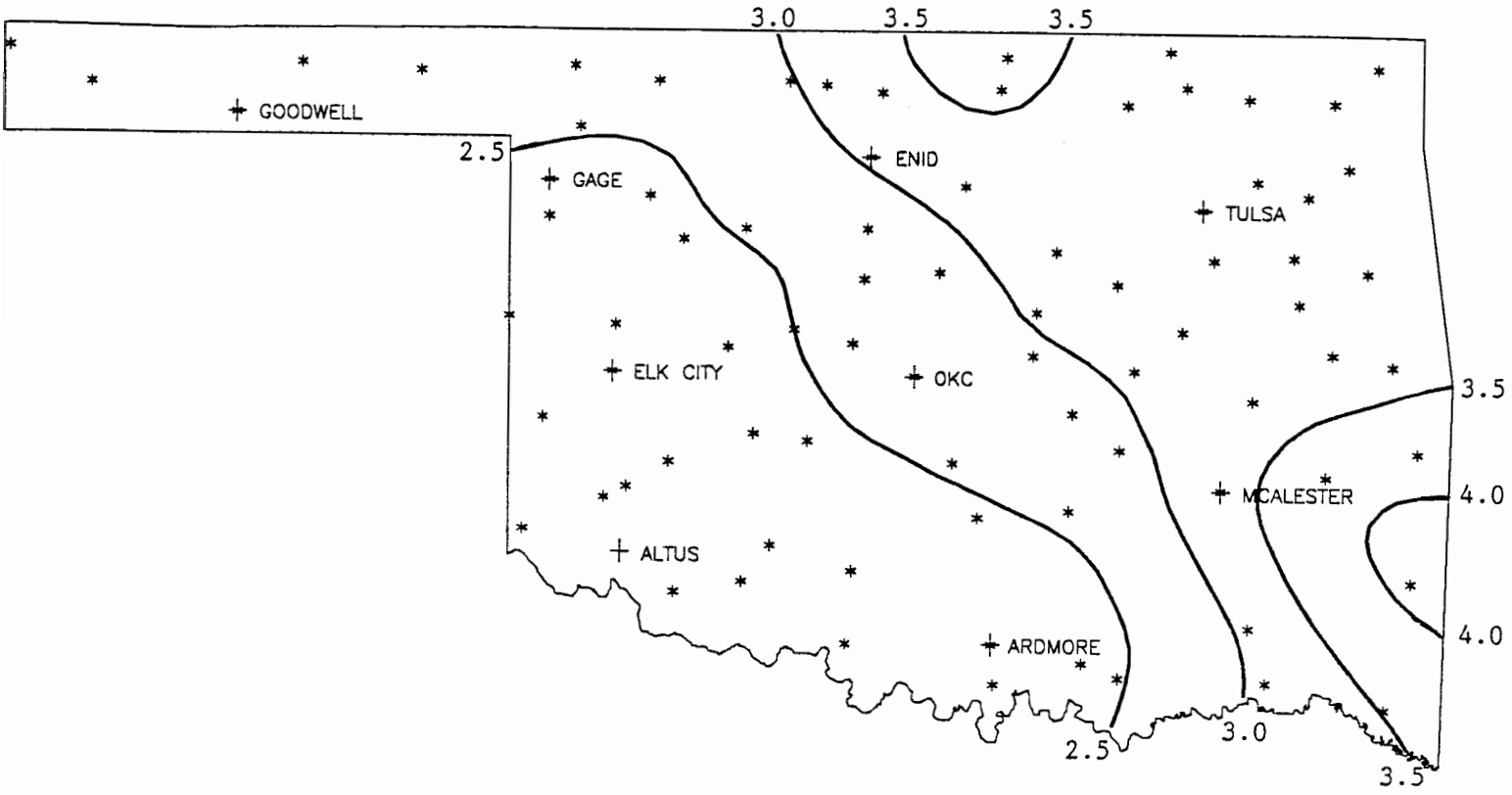
DATE	SUNRISE	SUNSET	DAYLIGHT
900701	6:12AM	8:43PM LT	14:31
900702	6:12AM	8:43PM LT	14:30
900703	6:13AM	8:43PM LT	14:30
900704	6:13AM	8:42PM LT	14:29
900705	6:14AM	8:42PM LT	14:29
900706	6:14AM	8:42PM LT	14:28
900707	6:14AM	8:42PM LT	14:28
900708	6:15AM	8:42PM LT	14:27
900709	6:16AM	8:42PM LT	14:26
900710	6:16AM	8:41PM LT	14:25
900711	6:17AM	8:41PM LT	14:25
900712	6:17AM	8:41PM LT	14:24
900713	6:18AM	8:41PM LT	14:23
900714	6:18AM	8:40PM LT	14:22
900715	6:19AM	8:40PM LT	14:21
900716	6:20AM	8:39PM LT	14:20
900717	6:20AM	8:39PM LT	14:19
900718	6:21AM	8:39PM LT	14:18
900719	6:22AM	8:38PM LT	14:17
900720	6:22AM	8:38PM LT	14:15
900721	6:23AM	8:37PM LT	14:14
900722	6:24AM	8:36PM LT	14:13
900723	6:24AM	8:36PM LT	14:12
900724	6:25AM	8:35PM LT	14:10
900725	6:26AM	8:35PM LT	14: 9
900726	6:26AM	8:34PM LT	14: 8
900727	6:27AM	8:33PM LT	14: 6
900728	6:28AM	8:32PM LT	14: 5
900729	6:28AM	8:32PM LT	14: 3
900730	6:29AM	8:31PM LT	14: 2
900731	6:30AM	8:30PM LT	14: 0



30-YEAR MEAN JULY DAILY MAXIMUM TEMPERATURE



30-YEAR MEAN JULY DAILY MINIMUM TEMPERATURE



30-YEAR MEAN JULY PRECIPITATION

30- and 90-DAY NATIONAL WEATHER SERVICE OUTLOOK

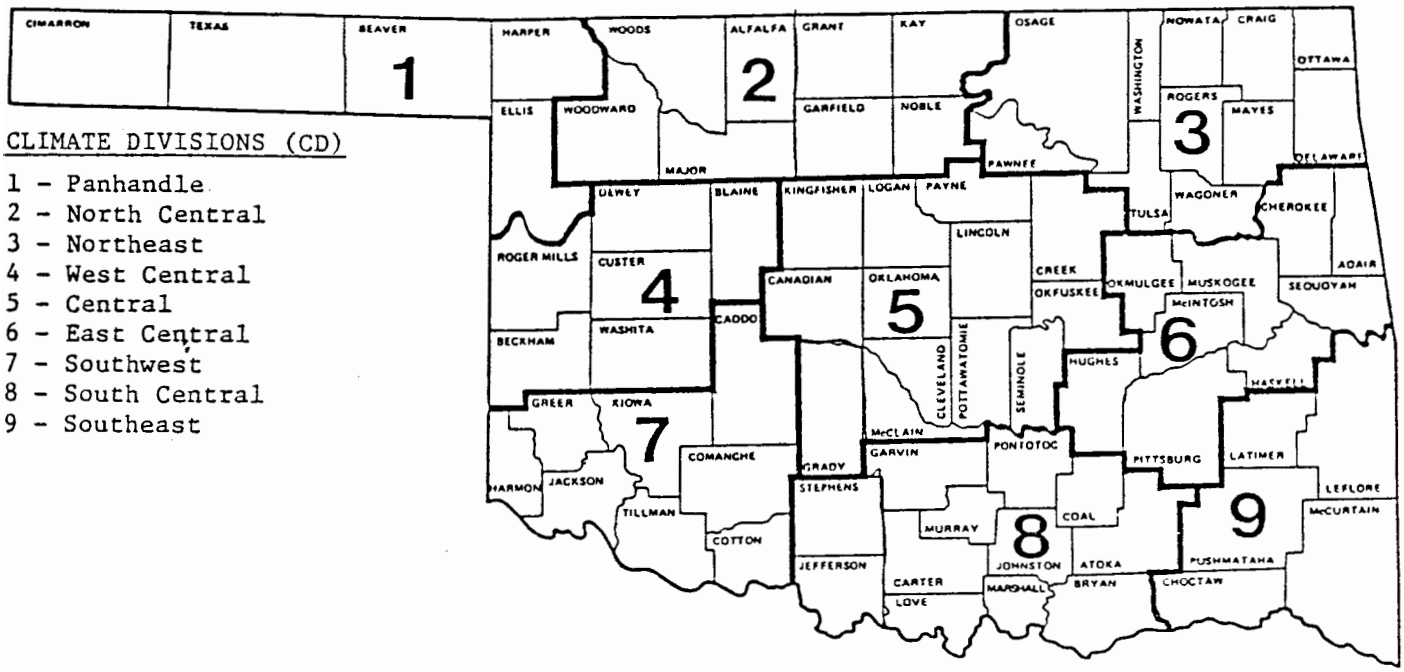
30-DAY OUTLOOK (MID-JUNE TO MID-JULY)

Precipitation - Below Normal Statewide
Temperature - Above Normal Statewide

90-DAY OUTLOOK (JUNE-AUGUST)

Precipitation - Above Normal Statewide
Temperature - Significantly Below Normal Statewide

O K L A H O M A



CLIMATE DIVISIONS (CD)

1 - Panhandle
2 - North Central
3 - Northeast
4 - West Central
5 - Central
6 - East Central
7 - Southwest
8 - South Central
9 - Southeast

EXPLANATION OF TABLES

Two kinds of tables appear in this summary. The first is a set of tables containing all reporting stations grouped by climate division. The figure above shows the locations of the climate divisions. Each table contains the following information for each station:

Station Name:

Station Identification Number: These are usually assigned by the National Climatic Data Center.

Climate Division: See the figure above.

Number of Temperature Observations: These are the actual number of temperature reports recorded at the station during the current month. Missing observations may result in artificially high or low mean monthly temperatures.

Deviation from Normal: The deviation of the observed mean monthly temperature from the monthly station normal. A positive value indicates the month was warmer than normal. A negative value indicates the month was cooler than normal. Normal monthly temperatures may be calculated by subtracting the deviation from the observed temperature.

Maximum Daily Maximum: The maximum daily maximum temperature observed during the current month and year and the day which it occurred.

Minimum Daily Minimum: The minimum daily minimum temperature observed during the current month and year and the day which it occurred.

Heating Degree Days: HDD are calculated each day of the month for which there is a temperature report and summed. They are a qualitative measure of how much heat was required to maintain a comfortable indoor temperature. Missing observations may result in an artificially high or low value. For February 1984 HDD would be calculated as:

$$\sum_{i=1}^{29} 65-((TMAX_i + TMIN_i)/2)$$

Deviation from Normal Heating Degree Days: A positive value indicates higher than normal heating requirements for the month as a whole. A negative value indicates lower than normal heating requirements for the month as a whole. Normal HDD may be calculated by subtracting the deviation from observed HDD.

Cooling Degree Days: CDD are calculated each day of the month for which there is a temperature report and summed. They are a proxy measure of how much cooling was required to maintain a comfortable indoor temperature. Missing observations may result in an artificially high or low value. For June, CDD would be calculated as:

$$\sum_{i=1}^{30} ((TMAX_i + TMIN_i)/2)-65$$

Deviation from Normal Cooling Degree Days: A positive value indicates higher than normal cooling requirements for the month as a whole. A negative value indicates lower than normal cooling requirements for the month as a whole. Normal cooling degree days may be found by subtracting the deviation from the observed cooling degree days.

Total Precipitation: Often incorrectly referred to as mean precipitation, this value is the sum of all precipitation reported during the month at a station. If snow occurred, it is to be melted and its water equivalent recorded.

Number of Precipitation Observations: The number of days a rain or no-rain observation was reported. Missing observations frequently result in artificially low total precipitation values.

Deviation from Normal Precipitation: A positive value indicates more rain than normal was received. A negative value indicates less than was expected rainfall was received. Normal rainfall may be calculated by subtracting the deviation from monthly total.

Maximum 24-Hour Report and Day: The maximum amount of precipitation recorded during the station's 24-hour observation period for the current month and year and the day on which it was recorded.

The second set of tables contain similar information but are the average or extreme over all the stations reporting in each climate division.

EXPLANATION OF MAPS

To give a Statewide perspective, a series of maps is produced each month from the information contained in the station tables. Each map is calculated using between 50 and 200 observations. Only stations with complete monthly records are used. Each observation is put into one of three categories and assigned a plus (+), minus (-), or a dot (.). The minus is the lowest numeric category, the dot is the middle and the plus the highest numeric category. If a map location has no report, a value is estimated. Each map is accompanied by its own legend. The categories will vary from month to month throughout the year. The categories for the deviations from normal maps will always remain constant. This is to facilitate comparisons between months and across years.

JULY 1990

CLIMATE CALENDAR

The data on this calendar are for Oklahoma City. Normal values are calculated for the period 1948-1987. Extremes are found for the period of record (1924-present).

Normal	1	Actual
90.3	max	
69.5	min	
.207	pcpn	
0	HDD	
15	CDD	
Highest Max		102-1980
Lowest Max		69-1951
Lowest Min		57-1951
Highest Min		78-1931
Greatest pcpn		3.35-1940

Normal	2	Actual
92.1	max	
70.4	min	
.076	pcpn	
0	HDD	
17	CDD	
Highest Max		105-1948
Lowest Max		81- 1988
Lowest Min		61-1945
Highest Min		78-1980
Greatest pcpn		1.61-1972

Normal	3	Actual
92.5	max	
71.2	min	
.068	pcpn	
0	HDD	
17	CDD	
Highest Max		103-1980
Lowest Max		80-1941
Lowest Min		62-1968
Highest Min		78-1933
Greatest pcpn		2.97-1947

Normal	4	Actual
91.1	max	
69.9	min	
.071	pcpn	
0	HDD	
16	CDD	
Highest Max		102-1934
Lowest Max		76-1972
Lowest Min		59-1940
Highest Min		80-1933
Greatest pcpn		.95-1960

Normal	5	Actual
91.1	max	
69.2	min	
.105	pcpn	
0	HDD	
15	CDD	
Highest Max		102-1966
Lowest Max		77-1958
Lowest Min		57-1942
Highest Min		80-1933
Greatest pcpn		3.21-1979

Normal	6	Actual
91.9	max	
69.7	min	
.073	pcpn	
0	HDD	
16	CDD	
Highest Max		102-1953
Lowest Max		73-1958
Lowest Min		55-1972
Highest Min		77-1986
Greatest pcpn		1.84-1929

Normal	7	Actual
92.6	max	
70.1	min	
.070	pcpn	
0	HDD	
17	CDD	
Highest Max		105-1970
Lowest Max		76-1960
Lowest Min		57-1952
Highest Min		77-1963
Greatest pcpn		1.39-1953

Normal	8	Actual
93.0	max	
70.4	min	
.036	pcpn	
0	HDD	
17	CDD	
Highest Max		105-1964
Lowest Max		82-1958
Lowest Min		57-1958
Highest Min		78-1931
Greatest pcpn		1.32-1959

Normal	9	Actual
93.1	max	
70.4	min	
.048	pcpn	
0	HDD	
17	CDD	
Highest Max		106-1964
Lowest Max		81-1961
Lowest Min		61-1952
Highest Min		80-1933
Greatest pcpn		1.88-1926

Normal	10	Actual
93.3	max	
70.2	min	
.052	pcpn	
0	HDD	
17	CDD	
Highest Max		104-1933
Lowest Max		76-1953
Lowest Min		58-1961
Highest Min		80-1933
Greatest pcpn		1.90-1945

Normal	11	Actual
93.3	max	
70.5	min	
.039	pcpn	
0	HDD	
17	CDD	
Highest Max		107-1933
Lowest Max		76-1953
Lowest Min		58-1931
Highest Min		81-1933
Greatest pcpn		.83-1940

Normal	12	Actual
92.8	max	
70.7	min	
.081	pcpn	
0	HDD	
17	CDD	
Highest Max		107-1954
Lowest Max		64-1953
Lowest Min		56-1953
Highest Min		82-1933
Greatest pcpn		1.80-1926

Normal	13	Actual
93.0	max	
70.0	min	
.124	pcpn	
0	HDD	
17	CDD	
Highest Max		106-1954
Lowest Max		73-1953
Lowest Min		56-1975
Highest Min		81-1934
Greatest pcpn		2.10-1963

Normal	14	Actual
93.2	max	
69.9	min	
.058	pcpn	
0	HDD	
17	CDD	
Highest Max		107-1954
Lowest Max		80-1926
Lowest Min		58-1926
Highest Min		80-1934
Greatest pcpn		.71-1961

Normal	15	Actual
92.5	max	
70.7	min	
.082	pcpn	
0	HDD	
17	CDD	
Highest Max		108-1936
Lowest Max		80-1952
Lowest Min		59-1967
Highest Min		82-1936
Greatest pcpn		1.70-1938

Normal	16	Actual
93.0	max	
70.9	min	
.048	pcpn	
0	HDD	
17	CDD	
Highest Max		106-1980
Lowest Max		74-1967
Lowest Min		64-1926
Highest Min		79-1939
Greatest pcpn		.61-1953

Normal	17	Actual
93.3	max	
70.7	min	
.158	pcpn	
0	HDD	
17	CDD	
Highest Max		106-1980
Lowest Max		80-1950
Lowest Min		63-1967
Highest Min		79-1943
Greatest pcpn		1.71-1959

Normal	18	Actual
93.8	max	
71.7	min	
.022	pcpn	
0	HDD	
18	CDD	
Highest Max		108-1936
Lowest Max		72-1967
Lowest Min		64-1931
Highest Min		81-1936
Greatest pcpn		.70-1931

Normal	19	Actual
93.8	max	
71.5	min	
.059	pcpn	
0	HDD	
18	CDD	
Highest Max		109-1936
Lowest Max		74-1953
Lowest Min		63-1931
Highest Min		82-1936
Greatest pcpn		.81-1953

Normal	20	Actual
93.7	max	
71.1	min	
.055	pcpn	
0	HDD	
18	CDD	
Highest Max		107-1936
Lowest Max		77-1944
Lowest Min		60-1970
Highest Min		77-1930
Greatest pcpn		1.15-1973

Normal	21	Actual
93.4	max	
71.0	min	
.136	pcpn	
0	HDD	
17	CDD	
Highest Max		107-1939
Lowest Max		78-1970
Lowest Min		54-1970
Highest Min		80-1981
Greatest pcpn		1.64-1950

Normal	22	Actual
93.3	max	
71.4	min	
.093	pcpn	
0	HDD	
18	CDD	
Highest Max		107-1974
Lowest Max		79-1960
Lowest Min		57-1970
Highest Min		79-1981
Greatest pcpn		1.00-1960

Normal	23	Actual
92.9	max	
70.5	min	
.169	pcpn	
0	HDD	
17	CDD	
Highest Max		104-1943
Lowest Max		77-1989
Lowest Min		55-1970
Highest Min		79-1943
Greatest pcpn		3.02-1960

Normal	24	Actual
93.7	max	
71.3	min	
.083	pcpn	
0	HDD	
18	CDD	
Highest Max		106-1943
Lowest Max		73-1947
Lowest Min		61-1927
Highest Min		78-1934
Greatest pcpn		2.92-1975

Normal	25	Actual
94.4	max	
72.0	min	
.079	pcpn	
0	HDD	
18	CDD	
Highest Max		106-1977
Lowest Max		78-1926
Lowest Min		66-1989
Highest Min		83-1934
Greatest pcpn		1.48-1950

Normal	26	Actual
93.8	max	
72.0	min	
.083	pcpn	
0	HDD	
18	CDD	
Highest Max		106-1978
Lowest Max		75-1959
Lowest Min		64-1933
Highest Min		78-1930
Greatest pcpn		.88-1978

Normal	27	Actual
94.2	max	
71.3	min	
.256	pcpn	
0	HDD	
18	CDD	
Highest Max		105-1986
Lowest Max		75-1959
Lowest Min		65-1933
Highest Min		78-1931
Greatest pcpn		1.88-1977

Normal	28	Actual
92.6	max	
70.8	min	
.183	pcpn	
0	HDD	
17	CDD	
Highest Max		108-1986
Lowest Max		75-1981
Lowest Min		61-1931
Highest Min		80-1946
Greatest pcpn		5.75-1981

Normal	29	Actual
93.3	max	
70.8	min	
.167	pcpn	
0	HDD	
17	CDD	
Highest Max		108-1986
Lowest Max		82-1927
Lowest Min		57-1931
Highest Min		79-1966
Greatest pcpn		2.02-1975

Normal	30	Actual
93.5	max	
71.1	min	
.043	pcpn	
0	HDD	
18	CDD	
Highest Max		108-1986
Lowest Max		79-1933
Lowest Min		57-1971
Highest Min		80-1986
Greatest pcpn		.71-1936

Normal	31	Actual
93.0	max	
70.6	min	
.055	pcpn	
0	HDD	
17	CDD	
Highest Max		107-1980
Lowest Max		83-1933
Lowest Min		53-1971
Highest Min		79-1943
Greatest pcpn		1.07-1978

JULY AVERAGES

Temperature	:	81.8°F
Precipitation	:	2.88"
Heating Degree Days:		0
Cooling Degree Days:		530